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Hindsight Bias in Prospective Financial Reporting

By
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TABLE OF CONTENTS

CHAPTER ONE

PROSPECTIVE FINANCIAL STATEMENTS AND THE AUDITOR

Accountants are associated with financial information in ways that increasingly diverge from traditional historical financial statements. The involvement of an accountant in preparing and reviewing prospective financial information is a prime example of this phenomenon. Since the 1970's, investors, lenders, and financial analysts have steadily increased their demand for future-oriented business and financial information. This information helps users of financial information make rational and more accurate lending and investment decisions. However, the accounting profession is seriously concerned with the level of responsibility and legal liability that it may face in becoming involved with forecasted information (Koga and Robertson 1989, p. 43). This emphasis on the importance of prospective information and the need for it to be credible creates the need for the accounting profession to develop standards for the involvement with prospective financial information.

According to the American Accounting Association's *A Statement of Basic Auditing Concepts* (1972; Cockburn and Gordon, 1988), auditing can be defined as "a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users." The Securities and Exchange Commission (SEC) does not permit any company to list its organization on any exchanges without having its financial information audited by an independent accountant at least annually. However, an organization in its infant stages of development does not have the historical information to serve as a foundation.

In order to attract investors and creditors, the organization must provide future-oriented information that is sound and attainable and provides assurance to its stakeholders. Allowing an independent accountant compile and/or examine the prospective financial information provides better assurance that the assumptions and prospective financial statements are consistent and "reasonably objective."

Past Auditing Research

Instances where prospective financial information is demanded are lending situations. Loan officers, in evaluating loan proposals, need to judge the prospective client's ability to pay the obligation as stated in the loan agreement. To insure the accuracy of the data in financial statements, the loan officer generally requires that an independent accountant perform an audit on the statements. In this case, the auditor's formal means of communicating any uncertainties within the loan proposal is through the audit opinion.

To illustrate the significance of accountants' involvement in looking at future-oriented information, Libby (1979) conducted an empirical study that examined the effects of the loan decision behavior of the accountant disclosing an uncertainty in footnotes of the financial statements, and of adding the auditor's "subject to" uncertainty qualification in the footnote disclosures. The results of his experiment showed that the disclosure of uncertainty had a major effect on the loan officers' (subjects) risk assessments; however, the addition of the auditor's qualification had no effect on this information. Although an explanation for this could be the redundancy of information, it does raise questions as to the strength of an auditor's opinion in the context of a loan

proposal. The focus on the communication process between the auditor and the banker, according to Libby, is on the reporting deficiencies, which result in departures from the auditor's standard report (36). By requiring an audit, the loan officer is demonstrating that there is reliance on the auditor's judgment (opinion) as a degree of credibility and value for the financial information (35-36).

Likewise, Strawser (1994) conducted a study to examine the effects of the accountant's involvement with forecasts on the decisions and perceptions of commercial lenders. Also using a sample of commercial lenders and a hypothetical loan candidate's forecasted financial statements in his study, the results indicated a higher probability of the loan candidate receiving a more favorable loan decision when an independent accountant examined the forecasted financial information. Moreover, the probability of the loan being granted increased when the same accountant performed an audit examination, indicating that the knowledge obtained by the accountant supports the assurances provided by examination procedures. Thus, as Strawser demonstrated, an audit lends credibility to accounting information generated by an organization and, enhances its value.

AICPA Pronouncements

In October 1985, the Auditing Standards Board, under rule 201 of the American Institute of Certified Public Accountants (AICPA) Code of Professional Ethics, issued a Statement on Standards for Accountants' Services on Prospective Financial Information, entitled, *Financial Forecasts and Projections* (FFP), establishing professional requirements and guidelines for reviewing prospective financial information. The

statement defines prospective financial statements as either "financial forecasts or financial projections including the summaries of significant assumptions and accounting policies" (FFP 1985, par. 6, p. 135; *Guide*, 1986, 200.03, p. 11). Under this definition, pro forma financial statements and partial presentations are not considered prospective financial statements. In addition, the statement sets standards and provides guidance to accountants regarding the performance and reporting for engagements to compile, examine, or apply agreed-upon procedures to prospective financial statements (FFP 1985, par. 1, p. 134). The statement is codified with statements on auditing standards; however, it was not issued as a Statement of Auditing Standards (SAS) because SASs establish standards related only to audits of historical financial statements. As a result, the AICPA believed that these standards would be beneficial to accountants, clients, and users of prospective financial statements by establishing consistency in accountants' services and reports on them (Pallais and Guy, 1986, p. 90).

To accompany the FFP, the AICPA issued an implementation guide, *Guide for Prospective Financial Statements* (*Guide*) in 1986. These two publications provide general guidelines for auditors' responsibilities in the context of prospective financial information; they do not present details about applying the specific procedures in conducting accountants' services, nor do they address any difficulties that may arise (Koga and Robertson, 1989, p. 42). The *Guide* establishes presentation guidelines for prospective financial statements (i.e., analogous to generally accepted accounting principles) and provides explanatory and illustrative material on the accountants' services described in the FFP and suggestions about methods of preparing prospective financial statements and about services not covered.

However, while the accountant may assist the responsible party (i.e., management) in identifying assumptions, gathering information, or assembling the prospective financial statements, the AICPA prohibits accountants from providing services on prospective information for third-party use if the statements do not disclose the underlying assumptions or if statements appropriate only for limited use are to be distributed to users that are not negotiating directly with the issuer. Uses of prospective financial statements are distinguished between "general" and "limited" uses. General use is the use of prospective financial statements by individuals with whom the responsible party is not negotiating directly. In this case, only the development of a financial forecast is appropriate. On the other hand, limited use is the use of prospective financial statements by the responsible (management) party alone or by the responsible party and third parties with whom the responsible party is negotiating directly. An example would be if the responsible party was negotiating for a bank loan. The limited use of prospective financial statements allows for either a financial forecast or a financial projection with hypothetical assumptions.

"Reasonably Objective Basis"

Since the issuance of the two publications, practitioners have requested additional guidance and literature on some common areas of practice where existing literature does not provide explicit directions. In response to the demand for more clarification on prospective financial statements, the AICPA established the Forecasts and Projections Task Force in 1987 to identify problems in implementing the two pronouncements and to determine whether additional guidance was needed (Carmichael, Blanco, and Dirkes,

1988). Since then, numerous Statements of Position (SOP) have been issued as amendments to the *Guide* to help clarify the roles and responsibilities of accountants in dealing with prospective financial statements. In particular, SOP 92-2, "Questions and Answers on the Term *Reasonably Objective Basis* and Other Issues Affecting Prospective Financial Statements" provides clarification on the evaluation of the forecasted data. Applying only to financial forecasts, the SOP also provides guidance for evaluating whether the length of forecast periods is appropriate and guidance for disclosures that may be necessary for periods beyond the forecasted periods. In addition, it discusses the accountant's responsibilities for evaluating 1) whether the responsible party has a "reasonably objective basis" to present a financial forecast and 2) the responsible party's disclosure of long-term results (Dirkes, 1992).

When evaluating whether a reasonably objective basis exists, there is no substitute for the responsible party's knowledge of the organization's business and industry. This applies to third-party involvement such as an independent accountant because a financial forecast is a "quantification of the responsible party's plan and on the responsible party has the authority to carry out those plans" (Dirkes, 1992). According to the AICPA, an accountant should not examine a future-oriented presentation that omits all disclosures of assumptions (FFP 1985, par. 40, p. 140). Because users expect financial forecasts to present the responsible party's best estimate, the term "reasonably objective basis" was included in the Guide to communicate to the responsible party an expected level of quality of information necessary to present a forecast. The responsible party should be able to demonstrate that such a basis exists; otherwise, a financial forecast should not be presented (Dirkes, 1992).

To establish a "reasonably objective basis" to present a financial forecast, the responsible party must be able to point to data and other references in support of the significant assumptions. Factors that the responsible party should consider when evaluating whether assumptions underlying a financial forecast are appropriate include the following (SOP 1992, par. 8, p. 5):

- there appears to be a rational relationship between the assumptions and the underlying facts and circumstances;
- assumptions are complete;
- assumptions are developed without undue optimism or pessimism;
- assumptions are consistent with the entity's plan and expectations;
- assumptions are consistent with each other; and
- assumptions make sense in the context of the forecast taken as a whole.

It is important that the responsible party is not overly biased in selecting the assumptions; undue optimism may cause backlash to the preparer and the independent accountants when a financial forecast is challenged by those with the benefit of hindsight (Dirkes, 1992).

Auditor Responsibility and Examination

Regardless of the extent of the accountant's participation, the assumptions remain the responsibility of the responsible party. The responsible party must evaluate the assumptions, make key decisions, and adopt and present the assumptions as its own (*Guide*, 1986, 220.03, p. 17). When the responsible party is making assumptions when

forming prospective financial statements, occasionally, the assumptions made are predicted to relate directly to a user's prospective action. The accountant will need to be careful to obtain support for these assumptions that are dependent on the action of users. In the process of examining if the assumptions are "reasonably objective," the accountant should keep in mind the following whether (FFP, Appendix C, para.11, p. 147):

- sufficient pertinent (external and internal) sources of information about the assumptions have been considered;
- assumptions are consistent with the sources from which they are derived;
- assumptions are consistent with each other; and
- logical assumptions or theory, considered with the data supporting the assumptions, are reasonable.

A way to safeguard the accountant's potential legal liability is to obtain written representation in which the responsible party indicates its responsibility to the assumptions and presentation. Besides being required by the AICPA forecasts and projections standards, courts view them as evidence of responsibility for financial statements.

The objective of the accountant during an examination of prospective financial statements and of the significant assumptions is to accumulate sufficient evidence to limit attestation risk to a level that is appropriate for the level of assurance. The accountant needs to establish with the client a clear understanding about the nature of the engagement. The AICPA recommends using an engagement letter to document that understanding—the more limited the accountant's service, the more important it is to have an engagement letter that specifies the exact nature of the engagement (Pallais,

1994). In addition, the extent to how detailed an accountant performs the examination procedures should be based on the accountant's consideration of (FFP, Appendix C, para. 8, p. 135):

- the nature and materiality of the information to the prospective financial statements taken as a whole;
- the likelihood of misstatements;
- knowledge obtained during current and previous engagements;
- the responsible party's competence with respect to prospective financial statements;
- extent to which the prospective financial statements are affected by the responsible party's judgment; and
- the adequacy of the responsible party's underlying data.

To understand the nature of the company, the accountant needs sufficient knowledge of the client's industry in order to identify any material misstatements in the prospective financial statements. This, however, is not knowledge that accountant is required to have before accepting the engagement; this type of knowledge can be acquired during the process of the engagement. Moreover, the accountant may use specialists in order to confirm and support management's assumptions; the accountant, in this case, does not have to reanalyze the specialist's conclusions, but needs to consider whether they appear reasonable (Pallais, 1994).

The accountant's main responsibility is for the report and the work that underlies it. In the report, the accountant provides assurance only about whether the prospective financial statements are presented in conformity with ACIPA presentation guidelines and

whether the assumptions provide a reasonable basis for management's predictions. The accountant does not provide assurance about the achievability of the prospective results issuing a statement declaring that the accountant has no responsibility to update the report for events and circumstances occurring after the date of the report. In addition, the accountant does not have the obligation to notify management and the users if he/she happens to find out results diverged from the forecast (FFP, Appendix C, par. 7, p.135).

Auditor Risk

However, even with AICPA standards and regulations developed for accountants engaged with prospective information, there are other limitations that the profession must face. First, since most future-oriented information is used to make investment decisions, opinions on prospective financial information are more subjective than opinions on historical financial information due to the degree of high uncertainty (Cockburn and Gordon 1988, p. 57). In this case, the auditor may face the risk that users of the prospective financial information will depend on the opinion as a guarantee of future results. This creates a potential legal liability for the accounting profession. Second, the accountant's evaluation of management's assumptions that underlie the forecast may be limited by the level of expertise the accountant has. The potential implications for these issues will be further discussed in the next two chapters.

The remainder of this thesis is organized as follows. The next chapter discusses the phenomenon of hindsight bias and the research conducted to analyze and examine its existence as well as ways of mitigating it. Chapter three reviews the literature and develops hypotheses relating to hindsight bias and its effect on prospective information. Chapters four and five focus on the experimental design and methodology, and provide

an analysis of the results, respectively. Finally, the last chapter summarizes the results and provides a discussion of their implications.

CHAPTER TWO

HINDSIGHT BIAS

Research in both psychology and accounting has documented a phenomenon known as the hindsight effect, where people tend judge a possible outcome as *ex ante* more likely when they know that the outcome has already occurred. They believe that they "knew it all along." Also known as hindsight bias, this mentality results in situations where people believe that others should have been able to foresee events much better than was actually the case. Individuals even distort their own predictions so as to exaggerate in hindsight what they knew in foresight (Kahneman, Slovic, and Tversky 1982, p. 428). Thus, hindsight bias refers to the tendency for people to: 1) believe that an outcome was relatively inevitable, and 2) overestimate how foreseeable the outcome was in foresight (Jennings, Lowe, and Reckers 1998, p. 144).

The existence of hindsight bias is based upon the belief that if individuals look, they will be able to discern some interpretable patterns. Individuals act as if they are unable to separate outcome knowledge from pre-outcome knowledge (knowledge that existed prior to the outcome) (Buchman, 1985). There are situations that, due to the limitation and uncertainty of the information, occasional surprises and failures are inevitable. However, it is both unfair and self-defeating to blame the decision maker who has erred in an imperfect system without the acknowledgment that the system is fallible and doing something to improve the system. According to Kahneman et. al. (1982), hindsight bias seems to be, "quite robust and widespread. Reducing it requires some understanding of and hypotheses about people's cognitive processes" (431). Fischhoff

(1975) suggested that in hindsight, decision makers integrate outcome knowledge with pre-outcome knowledge in trying to form a coherent and complete explanation. According to his research, people who receive outcome knowledge are, "unaware of its having changed their perceptions in the manner where an outcome's occurrence increases its perceived probability of occurrence" (288). Studied extensively in the psychological and accounting fields, many researchers have documented the existence of hindsight bias; yet, few attempts have been made to explain the reason for its existence.

According to Hawkins and Hastie (1990), the hindsight effect is a "projection of new knowledge into the past accompanied by a denial that the outcome information has influenced judgment" (311). Reflected in past research, where subjects assigned probabilities to future probable outcomes of a given scenario, hindsight bias has been defined as a significantly higher conditional probability assigned (by subjects) to an outcome in the hindsight condition (having knowledge of the outcome) than in the foresight condition (having no outcome knowledge). In their study, Reimers and Butler (1992) noted that, although most experiments have been posed as tests of subjects' ability to reconstruct a foresightful state of knowledge, rather than as tests of how extensive that knowledge was, the temptations to exaggerate might still remain.

Likewise, Brown and Solomon (1987) demonstrated that in the managerial context, hindsight bias exists when performance evaluations are conducted. Managers must often rely on internal accounting and managerial information systems when evaluating other managers' and subordinates' decisions and their evaluations on accounting data. As a result, their decisions may be subject to the hindsight effect (187). Using the scenario of a capital budgeting committee approving a video movie rental

project, subjects were asked to indicate how strongly they believed that the committee's approval of the video movie rental project was a significant judgment error. The primary results from the experiment were that subjects with the benefit of outcome knowledge (hindsight) knowledge affected the evaluations of the committee's decision (565). Thus, Brown and Solomon demonstrated that when [managerial] decisions are evaluated after the evaluator knows the results of those decisions, the knowledge of the outcome might influence in how the evaluator perceives the manager.

Strength of Hindsight Bias

The strength of hindsight bias becomes a function of how improbable or how surprising the outcome. Buchman (1985) attempted to demonstrate this by trying to examine whether the hindsight effect existed in the public reporting environment. Subjects (graduate students in their last semester of their masters studies) were asked to predict the probability of a company declaring bankruptcy within the subsequent fiscal year. Subjects were divided into two groups: a foresight group (pre-outcome knowledge only) and a hindsight group (pre-outcome knowledge and outcome knowledge). The subjects in the hindsight group were told that the company went bankrupt in the subsequent year, but were asked to ignore this information when assigning the probabilities, whereas the foresight group had no knowledge of the bankruptcy outcome. Buchman also examined the effects of the auditors' opinion by giving one group each in the foresight and hindsight groups a qualified opinion to see if there was any "surprise" effect as a result of the opinion. The other two groups received a standard unqualified opinion. Since past research has indicated that hindsight bias has been found to be the

greatest when a less likely event occurs, then it would be expected that subjects who were told that a firm receiving an unqualified opinion went bankrupt would exhibit more hindsight bias than subjects who were told that a firm receiving a going concern opinion went bankrupt (269).

The results of Buchman's experiment show that although subjects in the hindsight group were asked to ignore their knowledge of the bankruptcy, they were unable to do so; however, greater hindsight bias was also exhibited where there should have been less surprise (274). In addition, both the hindsight and foresight groups showed a significant hindsight bias of similar magnitude (Reimers and Butler, 1992, p. 187). Applying this in the context of the accounting profession, if the subjects were actual judges or jurors in a litigation case, when contemplating charges against an auditor, the auditor could face serious repercussions.

Auditing Environment

As evident in Buchman's experiment, the audit setting is conducive to the causal reconstruction given the fact that the accountant has detailed documentation of the audit through the workpapers. These workpapers can serve as incriminating evidence against the accountant in the event that the accountant faces litigation from the client or other stakeholders (Jennings, Lowe, and Reckers, 1998, p. 145). Because of this potential consequence, auditors, knowing that their judgments are evaluated in hindsight, want to demonstrate due professional care. In the likely case where the auditor faces litigation, hindsight bias could influence a judge or juror since they have the set of facts that were available to the auditor prior to outcome. Either the judge or the jurors will need to

decide if the auditor: 1) gathered sufficient and competent evidence upon which to form an opinion, and 2) if enough evidence was gathered, whether the auditor reached a sound judgment about the financial statements and issued the appropriate opinion (Buchman 1985, p. 267). However, research studies show that judges may be unable to disregard outcome information in their legal judgments, thus exhibiting hindsight bias.

To address the issue the question of potential audit litigation, Jennings, Lowe, and Reckers (1998) conducted research on causality as an influence on hindsight bias and examined judges' evaluation of professional audit judgment. In the context of an external audit legal liability scenario, judges are typically presented with a negative outcome in which case, they are asked to ignore and base their review and evaluation of their judgments on the [defendant] auditor's performance prior to the occurrence of the negative outcome (150). The subjects (general jurisdiction judges) were given a case to review and make selected decisions related to the auditor's performance. Subjects were asked to provide evaluation judgments based upon the auditor's behavior prior to the occurrence of the negative outcome.

Results of the study confirmed that the subjects' assessment of the auditor's responsibility to foresee the outcome was positively correlated with the degree of foreseeability. The judges gave the auditor lower evaluations when there was a causal relationship between the outcome and the events prior to the outcome, demonstrating the existence of hindsight bias. Likewise, when the judges were provided with an unforeseeable outcome, hindsight bias was not observed. Thus, even in situations where objectivity is crucial (i.e., legal settings), research suggests that evaluators (e.g., judges) tend to link responsibility to the decision maker for negative outcomes in relation to the

perception that the decision maker should have foreseen the outcome (Jennings et. al., 1998, p. 149; cited from Brown et. al., 1994; Chaiken and Darley, 1973; Mitchell and Kalb, 1981).

Besides trying to examine the existence and effects of hindsight bias, there have been attempts in past research to focus on "debiasing" strategies to reduce the amount of hindsight effect exhibited by evaluators. Although these attempts to mitigate hindsight bias have not been successful, the procedures to reduce it may cause more trouble if it increases people's faith in their judgmental abilities more than it improves their abilities (Kahneman et al., 1982; p 575). Reimers and Butler (1992) suggest that rather than alter the hindsight judgment as prior researchers have done, it may be useful to make the foresight judgment more like the hindsight judgment (188). Attempts to reduce the hindsight effects will be beneficial to the auditing profession and others who are placed in the situation of having to examine and provide some type of review and/or evaluation for third parties. Further research should focus on the explanation and reasons for existence of the hindsight bias phenomenon.

One possible attraction of hindsight bias is that it may be flattering for individuals to represent themselves as having known all along what was going to happen. On the other hand, if, in retrospect, the outcome appears to have seemed relatively likely, decision makers can do little more than berate themselves for not taking the appropriate steps that their knowledge seems to have dictated (Kahneman et al., 1982; p 342; 429). Hindsight bias is highly visible in many instances where business decision are made; as more researchers study this phenomenon, a greater understanding of the cognitive processes involved will be achieved. Chapter three will take this subject of hindsight bias

and place it in the context of prospective financial information and study the impact it may have on auditors who review these types of information.

CHAPTER THREE

RESEARCH PROBLEM AND HYPOTHESES

The occurrence of the hindsight effect in both courtrooms and financial markets may cause serious repercussions for the accountant and the reputation of the accounting firm. Prior research in both the auditing and psychology fields, as discussed in Chapters one and two, demonstrates that hindsight bias is prevalent and may produce negative effects for the accountant profession. This chapter characterizes the research problem and formulates several hypotheses concerning the existence of hindsight bias and when accountants examine prospective financial information.

When the AICPA published both the FFP and the *Guide* in 1985 and 1986, respectively, the objective was to establish guidelines for the preparation and presentation of prospective financial statements and also to inform and assist accountants in performing professional services. These pronouncements also provide guidance to the responsible parties for preparing prospective financial information, insuring that any assumptions developed do provide a "reasonably objective basis." However, in assisting the responsible party with the development and/or preparation of the prospective financial statements, the assumptions and predictions remain the responsibility of the responsible party. In section 220.01 of the *Guide* (1986, p. 17), it states:

> The responsible party cannot guarantee the achievement of the financial results set forth in the prospective financial statements because achievability depends on many factors that are outside of its control. However, the responsible party may influence the operations of an entity through planning, organizing, controlling, and directing its activities and, therefore, is in a position to develop reasonable or appropriate assumptions in respect to key factors.

Although the auditor's report explicitly states this and warns users that the actual results will probably differ from the prospective results, this warning is probably not enough to prevent aggrieved parties from holding auditors directly responsible for deviations from expectations. When a lawsuit is brought against the responsible party and the independent accountant, the courts try to determine whether the assumptions that fail to come true were appropriate at the time they were made. This, in turn, may cause the existence of hindsight bias when judges or jurors may rule in favor of the plaintiff and find the accountant (defendant) negligent.

The Legal Environment

Courts usually recognize that prospective financial information and assumptions are less stable, and therefore less reliable than historical information. Yet, at the same time, judges acknowledge the fact that users rely on prospective information to make financial decisions. Thus, the court opinions usually indicate where judges believe that the middle ground lies—sometimes in favor of the accountant, and other times allowing a jury to decide the outcome even when an accountant did not expect third-party reliance on the report (Pallais, 1994).

In *Eisenberg v. Gagnon* (1990), the plaintiffs argued that the defendant accounting firm allowed fraudulent financial projections and assumptions to be included in the offering memoranda for the sale of securities. The trial judge found in favor of the accountant, however, in the appellate court, the judge stated that the district court failed to instruct the jurors that projections and opinions that fall within the domain of "actionable misrepresentation" may have affected the jurors' verdicts; therefore, the

judge stated that appellate court must overturn the trial court's verdict in favor of the accountant (defendant). The assumption in question was a coal reserve report where the appeals court believed there were sufficient problems for the accountant to have been skeptical of it. According to the instructions of the court, the issue of fraudulent misrepresentation means a representation that, "an existing fact is true, it being known to the person making said representation that the facts represented to exist do not in fact exist and that said representation is false." In this case, the judge allowed the case to proceed to a trial with a jury to decide the issue. Likewise, in *Longden v. Sunderman*, as Pallais (1994) reports, the plaintiffs alleged that the prospective financial statements were unrealistic and that the accountant should have known this because the client's projects were failing. Although the accountant's opinion warned that the actual results would probably differ from the prospective results, the judge felt that this caveat was ineffective and was not a reason to leave the accountants blameless.

In the two previous cases discussed above, the judge allowed the cases to proceed where the accountant might face potential and serious legal liability. In other cases, in contrast, the judge has acknowledged the caveats in the accountants' opinions and ruled in favor of them. Although the present study does not address the courtroom environment, it does examine how third-party examiners assess the accountant's involvement in the preparation, presentation, and disclosure of prospective financial information and assumptions.

Hypotheses

Although prior research has not focused on the existence of hindsight bias in the context of prospective financial information, studies by Buchman (1985) and Strawser (1994) suggest that users and decision makers of financial information, both historical and prospective, depend on the independent accountant as providing a source of reliance and assurance to the statements. By taking components and views from each study, three hypotheses were developed and tested experimentally through the use of a questionnaire where participants to assume the role of a loan examiner in analyzing past loan decisions.

The first hypothesis addressed in the study examines the existence of whether hindsight bias exists in the examination of a company's prospective financial and operations information by giving an extreme outcome: a company filing for bankruptcy after two years of operations. Assuming the role as a loan examiner, the participants were divided into a foresight (only pre-outcome knowledge) and a hindsight (pre-outcome and outcome knowledge) and were asked whether or not they felt that the right decision was made, on the part of the bank, to grant the hypothetical start-up company the loan. This hypothesis serves to compare the differences in responses between participants in the foresight group versus those who are in the hindsight group. Based on prior studies, participants who do receive the outcome knowledge about the bankruptcy should rate the loan officer's decision lower than those who have only the foresight knowledge.

H1: Evaluations of whether or not the loan officer made the right decision made with the benefit of outcome knowledge (hindsight) will be lower than those made only with pre-outcome knowledge (foresight).

The second hypothesis examines the effect the audit opinion on the participants and how it relates to the loan granted by the loan officer. Similar to the second hypothesis tested by Buchman (1985), the researcher uses two different audit opinions to test for the effect of the hindsight effect: 1) an unqualified opinion in the context of prospective financial information stating that the company's forecast is in conformity with guidelines for the presentation of a forecast established by the AICPA, and that the underlying assumptions provide a "reasonably objective basis," and 2) an unqualified opinion with some discussion or comments by the accountant about certain items disclosed in the prospective financial information and assumptions for which the reader may need to take note. Similar to the assumptions that Buchman developed, in this experiment, hindsight participants who do receive the audit opinion with additional comments should be less "surprised" (thus, exhibiting less hindsight bias) when they are told that the bankruptcy outcome than the participants who receive the standard unqualified opinion. As a result, hindsight participants who receive the clean audit opinion will rate the loan officer's decision lower (loan officer did not make the right decision) than the hindsight participants who receive the audit opinion with the comments about the assumptions included. This hypothesis will test the participants' reactions to these two types of unqualified opinions issued by the accountant.

H2: The evaluation of the loan officer's decision will be lower for participants with outcome knowledge accompanied with the auditor's discussion of management's assumptions than participants with outcome knowledge accompanied with a standard unqualified opinion.

The third hypothesis will examine the level of responsibility the accountant should exhibit based upon the participants' expectations from the information provided to

them in the experiment instrument. The evaluation of the auditor by third parties often depends upon how much importance they place on the accountant's involvement. In cases where the client faces negative results, even though the accountant produces an unqualified opinion, the possibility that some of the blame is placed on the accountant for not raising questions or exercising due professional care is higher than in situations where the accountant disclosed concerns and comments about the client's ability to perform. Therefore, the third hypothesis will try to show whether or not participants in the study with both the benefit of hindsight and the auditor's opinion with additional comments stress a higher rating ("Greater Responsibility") than participants without the benefit of hindsight.

H3: The expectations of the accountant in evaluating management's assumptions and the prospective financial statements will be higher in the hindsight groups than in foresight groups.

In summary, hindsight bias can exist in the context of prospective as well as historical financial information. Its presence in the context of prospective financial information, especially when third parties rely on it, may not protect the accountant from serious litigation conditions or reputation risk. The next chapter will describe the details of the experiment and research instrument used in testing for the presence of hindsight bias in the context of prospective financial reporting.

CHAPTER FOUR

EXPERIMENTAL DESIGN AND METHODOLOGY

To test the existence of hindsight bias in the context of prospective financial statements and the potential repercussions, if any, for the auditor, the researcher developed a hypothetical loan proposal of a start-up company that included an industry overview, management's assumptions, and forecasted financial statements. Following a similar design used by Buchman (1985), the study used a two-by-two between subjects research design to test the three hypotheses (Figure 4.1). Four different variations of the questionnaire were given to the participants. Participants were divided into a foresight (pre-outcome knowledge only) and a hindsight group (pre-outcome and outcome knowledge). Participants in cells *A* and *B* were the foresight group; participants in cells *C* and *D* were the hindsight group. The participants were also divided so that cells *A* and *C* received a standard unqualified opinion while cells *B* and *D* received an unqualified audit opinion, but with comments and discussions about management's assumptions.

	Standard Unqualified Opinion	**Unqualified Opinion with comments about Management's Assumptions**
Foresight	*A*	*B*
Hindsight	*C*	*D*

Figure 4.1. Research Design

Research Instrument & Task

According to the hypothetical scenario, MBR, Inc., a medical billing and reimbursement company, was seeking to secure a $90,000 loan from a bank. The hypothetical loan officer granted the company this loan back in 1998, basing the decision on the prospective financial statements projected for the years 2000 and 2001 and on the assumptions developed by management. The reason for using this type of company was because it was introducing new technology that would affect and revolutionize the current practices of seeking insurance claims in the medical field. However, with the introduction of new technology would bring about uncertainty issues such as compatibility of equipment and software and the ability to offset high set-up costs with revenues. Therefore, the assumptions in the questionnaire pointed out this possible uncertainty and also the changes that may affect the medical practice.

Each participant randomly received one of the four versions of the questionnaire. The questionnaire also contained a cover page that asked for participant information such as their rank, majors, and level of accounting and finance coursework. The researcher read and explained the "Introduction" and "Your role" sections of the questionnaire to the participants before asking them to read and answer the rest of the instrument. Figure 4.2 shows the timeline of events given to the subjects in the research instrument. The participants were asked to assume the role of a loan examiner and were told that they were at the end of 2001 and were asked to evaluate the loan officer's decision. The following are the instructions provided for the participants to guide them through the questionnaire as well as the timeline (Figure 2) to clarify the time of events surrounding the scenario:

Your Role

You will assume the role of a financial process examiner. You have been asked to evaluate the loan decisions made by a loan officer. In 1999, the loan officer approved a loan proposal submitted by a start-up company based on a set of 2-year prospective financial statements and assumptions made by the management of the company. It is now the end of 2001 and you will decide whether or not the loan officer made the right decision in evaluating this proposal.

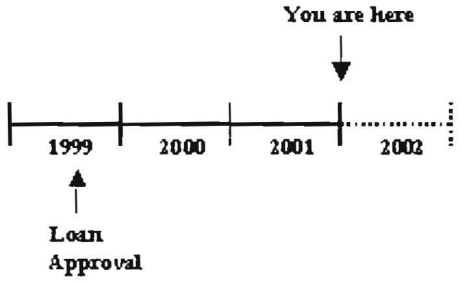


Figure 4.2. Timeline given to participants in questionnaire

Participants

The participants were 64 upper-level undergraduate and graduate students enrolled in high level accounting courses with the majority concentrating on either accounting or finance as their focus of study. All students had completed at least two accounting courses as required for prerequisites for the classes at which they were taken at the time of the experiment. The questionnaires were distributed during the end of class of the Summer 2001 quarter to three upper-level accounting courses that were required for either the accounting and/or finance major course requirements: Intermediate Financial Accounting II, Tax Accounting, and Advanced Accounting courses. The participants were randomly assigned to each cell in the experimental design. Choosing students as participants for this study was considered satisfactory because the level of

accounting background was sufficient with which to understand and analyze the information provided in the questionnaire. Appendix A contains the comprehensive list of the participants' demographics and responses to the questionnaire.

Independent Variables

Two between-subjects independent variables were manipulated in this study. The first independent variable was the reported outcome of the company in 2002 which took two levels: 1) a foresight condition and 2) a hindsight (bankruptcy) condition. In the foresight condition, participants were given a general case scenario, but were not given information about the subsequent events. Participants in the hindsight (bankruptcy) condition were given the general case scenario, but then were told that the company went bankrupt the subsequent year and asked to ignore this information when answering the questions.

The second between-subjects independent variable was the accountant's audit opinion after reviewing management's assumptions and the prospective financial information which also took two levels: 1) a standard unqualified opinion and 2) an unqualified opinion with additional comments about management's assumptions.

Dependent Variables

After reviewing the case information, and outcome (to the appropriate subjects), the participants were asked to respond to three sets of questions. In the first question, all participants were asked to indicate how strongly they believed that the loan officer's

decision, at the time [he/she] made it, to grant the loan was the right decision by answering the following question:

> *How strongly do you believe that the loan officer's decision, at the time he/she made it, to grant the loan was the right decision?*

The response was elicited on an 11-point scale that ranged from –5 (Strongly believe that the loan officer did not make the right decision) to +5 (Strongly believe that the loan officer made the right decision). The effect of outcome information is measured as the difference in the responses of the foresight and hindsight participants. The second question referred to the response to the first question by asking participants what factors in the case given influenced them to provide the answer in the first question:

> *What other factors in information given influenced you in selecting the answer above?*

Answering this open-ended question, participants listed factors that they found to affect their responses in the first question. Appendix A contains a list of the comments made and their corresponding responses to the first question. The third part of the questionnaire portion asked the participants to answer five questions. These questions asked the participants to evaluate the relationship and strength of the information provided in the case and the responsibility of the auditor:

1. *How much responsibility is the CPA assuming for the accuracy of the forecasted financial statements?*

2. *How confident are you that the forecasted financial statements accurately reflect the probable future financial position, results of operations, and cash flows of MBR, Inc.'s services?*

3. *How much assurance is the CPA giving with respect to the achievability of forecasted results?*

4. *To what extent do you feel the CPA evaluated the assumptions made by the management of MBR, Inc.'s services to generate the projected financial statements?*

5. *In making a loan decision, how much reliance would you place on the projected financial statements?*

Responses were elicited on a seven-point scale, one indicated that "Little Responsibility" and seven indicated "Great Responsibility." The responses to the third set of questions are also in Appendix A.

Appendix B contains: 1) a copy of the questionnaire given to the participants in cell *A*, 2) the instructions given to subjects in cell *C* and *D* disclosing the bankruptcy of the company, and 3) the opinion with discussion about the future feasibility of management's assumptions in cells *B* and *D*. Chapter five will discuss the results of the experiment, accept or reject the hypotheses tested, and analyze the outcomes and their relationships to the hypotheses.

CHAPTER FIVE

EXPERIMENT RESULTS AND ANALYSIS

The first three sections below present the test results for each of the hypotheses. A two-way analysis of variance (ANOVA) approach is used to test these hypotheses (Daniel and Terrell, 1992, p. 404-411). Figure 5.1 presents the mean probabilities and the number of participants in each cell assigned to the outcomes to questions in parts one and three given in the questionnaire.

The first hypothesis tests whether the evaluations made with the benefit of hindsight (outcome knowledge) will be significantly lower than those made only with foresight (pre-outcome knowledge only). From Figure 5.1, the foresight group ($\mu_{RD\,(A+B)}$ = +2.000) felt stronger about the decision made by the loan officer to grant the loan than the hindsight group in cells *C* and *D* ($\mu_{RD\,(C+D)}$ = +1.758). Table 5.1 presents the results, indicating that although the rating was higher, the differences exhibited between the foresight and the hindsight was not significant enough to be statistically meaningful. Therefore, the first hypothesis to be tested in this study is not supported. There was one participant (#17) who did not respond to the first question, but did respond to the remaining questions in the instrument. From this non-response, the actual mean response from cell *A* is different ($\mu_{RD\,(A)}$ = 2.313; S.D. = 0.793); however, even with this increase in the mean, the difference is not significant enough to be statistically meaningful.

	Standard Unqualified Opinion	Unqualified Opinion with additional comments about Management's Assumptions	Total
Foresight	*RD:* +2.176 (0.951) *AR:* 4.600 (0.980) *n*: 17 ***A***	*RD:* +1.786 (1.762) *AR:* 4.414 (1.060) *n*: 14 ***B***	*RD:* +2.000 (1.366) *AR:* 4.516 (1.004) *n*: 31
Hindsight	***C*** *RD:* +1.667 (2.114) *AR:* 4.044 (1.064) *n*: 18	***D*** *RD:* +1.867 (2.416) *AR*: 3.933 (1.115) *n*: 15	*RD:* +1.758 (2.223) *AR*: 3.994 (1.072) *n*: 33
Total	*RD:* +1.914 (1.652) *AR*: 4.314 (1.047) *n*: 35	*RD:* +1.828 (2.089) *AR*: 4.166 (1.097) *n*: 29	

RD: Right decision: mean and (S.D.): Scale –5 to +5
AR: Accountant's responsibility mean and (S.D.) for all five questions: Scale 1 to 7
n: number of subjects in the cell.

Figure 5.1. Mean and standard deviations by cell.

The second hypothesis tests whether the expectations of the accountant in evaluating management's assumptions and the prospective financial statements will be higher in the hindsight groups than in foresight groups. The researcher wanted to see if participants who had both the benefits of hindsight and also an unqualified opinion with comments on management's assumptions would give rate the loan officer's decision than participants who had the benefit of hindsight and the standard unqualified opinion. From Figure 5.1, hindsight participants who received the unqualified opinion with additional comments rated the loan officer's decision higher ($\mu_{RD\,(D)} = +1.867$) than the hindsight participants who received the standard unqualified opinion ($\mu_{RD\,(C)} = +1.667$). Although, similar to the results for the first hypothesis, the results are not statistically meaningful, it does provide some speculation about the participants and the instrument used. Results of the ANOVA testing for the second hypothesis are in Table 5.1. In comparing overall total, participants who received the standard opinion did rate the loan officer's decision higher ($\mu_{RD\,(A+C)} = +1.914$) than those who received the standard opinion with additional comments ($\mu_{RD\,(B+D)} = +1.828$); again, these results are not statistically meaningful. Therefore, the second hypothesis is not supported.

Table 5.1
ANOVA findings for foresight versus hindsight knowledge

	DF	Sum of Squares	Mean Squares	*F* Value	Pr (*F*)
Knowledge	1	0.9394	0.939394	0.2651644	0.608486
Opinion	1	0.1173	0.117251	0.0330965	0.8562552
Knowledge: Opinion	1	1.3823	1.382291	0.3901818	0.5345721
Error	60	212.5611	3.542684		

Although the main focus of the experiment was on the first question in the research instrument, the researcher wanted to understand the expectations the accountant faces as far as the level of responsibility expected. The third hypothesis tests whether the expectations of the accountant in evaluating the prospective financial statements and management's assumptions will be higher in the outcome knowledge groups than in foresight groups. According to Figure 5.1, the opposite of what was expected by the researcher occurred. Foresight participants ($\mu_{RD\,(A+B)} = 4.516$) attributed greater responsibility to the accountant than hindsight participants ($\mu_{RD\,(C+D)} = 3.994$). Table 5.2 presents the results. Thus, the third hypothesis is not supported.

Table 5.2
ANOVA findings for level of auditor responsibility (Total)

	DF	Sum of Squares	Mean Squares	*F* Value	Pr (*F*)
Knowledge	1	108.966	108.9663	3.925834	0.0521375
Opinion	1	8.594	8.594	0.309623	0.5799812
Knowledge: Opinion	1	0.551	0.5511	0.019855	0.8884139
Error	60	1665.373	27.7562		

Overall, the results are not statistically meaningful to the hypotheses; therefore, all three hypotheses cannot be confirmed. Although the mean scores for hindsight participants were lower than foresight participants for the first hypothesis and also overall for the second hypothesis, the results were not significant enough to be statistically meaningful and effective. Non-parametric procedures were also applied to the results; however since the experiment had a restricted data range (-5 to +5 and 1 to 7) for question one and three, respectively, it was not likely that the non-parametric procedures

could have produced statistically meaningful and ultimately, different results. The results from the non-parametric testing produced similar results as the ANOVA tests.

The next and final chapter of this study will focus on limitations during the experiment and with the instrument itself that may help explain the reasons for the experiment outcomes.

CHAPTER SIX

CONCLUSIONS AND LIMITATIONS

Although no statistically significant results emerged, observations and conclusions can be made about the implications of the overall experiment. Combined with the findings from prior research, the potential for hindsight bias to exist in the auditing context is inevitable and the focus of mitigating this phenomenon may be the next research topic.

Conclusions

First, the relatively insignificant difference exhibited between the foresight group and hindsight group leads the researcher to believe that the auditor's opinion is a weak manipulation to detect for hindsight bias. Buchman (1985) also manipulated the type of audit opinion his subjects received, yet, similar to this experiment, both [foresight and hindsight] groups showed a hindsight effect of similar magnitude. Therefore, it may be that the alteration of the audit opinion is not an effective means to test whether or not hindsight bias does exist in a financial reporting scenario.

Second, since prior research has not focused directly on the subject presented in this thesis, the experimental results may indicate that in financial reporting situations where there is relative high degree of uncertainty, the occurrence of hindsight bias may be minimal. As Strawser's (1994) study indicated, commercial lenders were influenced by the level of the accountant's involvement: the more involved the accountant becomes associated with the financial forecasts (e.g., examination engagement), the more

favorable the loan decision. Applying this finding to the current subject, one may speculate that the pressure for an accountant to be involved in any process of the preparation or presentation of the prospective financial statements and assumptions is high; however, the level of responsibility placed upon the accountant to be accountable for the forecasts may not be severe as with the case for historical financial information. Thus, users of prospective financial statements may be more aware of the nature of the projected information and more understandable when actual results differ from the projected information.

Experimental Limitations

The experimental design and methodology utilized is limited by certain constraining factors. The discussion of these constraining factors may help explain the reasons for the experiment outcomes and results. In addition, ways of addressing these limitations are also included.

The use of students for the experiment may have prevented the experiment from having a "realistic" effect. With very little relevant accounting and financial experience beyond what is presented in the scope of the classroom setting, students may have been unclear about the directions and purpose of the questionnaire instrument. Moreover, the amount of courses taken by the students varied in the different classes. Those who took the Advanced Accounting courses had already taken most of the required accounting courses for the major (averaging seven accounting classes). In addition, the students were a relatively captive audience, selection being based on the professors' time and interest. The experiment was also conducted at different times of the day. For instance,

research instrument in the intermediate financial accounting and the advanced accounting classes were passed out during the late morning and early afternoon times, whereas the tax accounting class met in the evening and many students left before the experiment was administered. Moreover, the day the researcher conducted this experiment in the tax class, students were preparing for a midterm examination for the following class time. Therefore, reasons for the unusual nature of the responses, especially to the first question, may be due to these factors that were beyond the control of the researcher.

The research instrument itself was not without flaws. Reasons for little presence of hindsight bias points to several factors in which the instrument could have been altered. First, rather than using two types of unqualified audit opinions, the result could have been more extreme—an unqualified and a qualified or adverse opinion. This may have caused the participants to pay more attention to the audit opinion. In addition, the audit opinion was the only true indication of any potential problems the company would have.

Second, the assumptions and prospective financial statements provided in the questionnaire did not directly point to any potential problems that the company may face. In fact, the reliance on the prospective financial statements by the participants surprised the researcher. Out of the 64 participants, only seven participants, in the second question of the research instrument, referred to a factor other than something disclosed in the prospective financial statements. Therefore, should the experiment be re-conducted, the prospective financial statements should provide a more serious outlook than they did, or they should not be included in the research instrument at all.

Another limitation with the research instrument is that the third set of questions did not directly correlate to the hypotheses tested. The questions, as presented in chapter four, could have been altered to test the expectations about the accountant's level of responsibility and involvement with prospective financial information.

Future Research

This thesis represents an attempt to test for the presence of hindsight bias in the scenario of prospective financial information and its effects (if any) on the accounting profession. Experience with the present study strongly suggests that there is a need for future research in this area. In addition to the limitations and constraints proposed to address in the prior section, there has not been other forms of research conducted in the observing the presence of hindsight bias in the context of prospective financial information. Studies to understand this phenomenon and reasons for its presence will help in understanding how it may affect accountants in the arena of prospective financial reporting.

APPENDIX A
PARTICIPANTS' DEMOGRAPHICS AND QUESTIONNAIRE RESPONSES

I. Overall Participant Demographics and Responses

II. Q1 and Q2 Comments

III. Design 1 Results

IV. Design 2 Results

V. Design 3 Results

VI. Design 4 Results

VII. AMIS 522 (Intermediate Financial Accounting II) Class Results

VIII. AMIS 624 (Advanced Accounting II) Class Results

IX. AMIS 626 (Tax Accounting II) Class Results

I.
OVERALL PARTICIPANT DEMOGRAPHICS AND RESPONSES

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
1	AMIS 626	1	4	ACT	3	0	2	2	3	3	5	4	17	3.4
2	AMIS 626	1	4	ACT	2	0	3	4	3	5	5	3	20	4
3	AMIS 626	1			1	0	2	7	7	6	6	6	32	6.4
4	AMIS 626	1	4	ACT / OPS	4	0	2	6	6	7	5	6	30	6
5	AMIS 626	2	GRAD	FIN	1	0	0	7	3	4	4	5	23	4.6
6	AMIS 626	2	4	ACT	4	0	3	5	5	3	5	6	24	4.8
7	AMIS 626	2	4	ACT / INT	7	1	-3	2	2	2	3	3	12	2.4
8	AMIS 626	3	3	ACT / FIN	3	0	2	6	5	5	7	5	28	5.6
9	AMIS 626	3	4	ACT	5	0	-2	5	5	4	6	7	27	5.4
10	AMIS 626	3	4	ACT	7	0	4	1	4	4	6	4	19	3.8
11	AMIS 626	3	GRAD	ACT / FIN	6	1	4	3	2	2	6	3	16	3.2
12	AMIS 626	3	4	ACT	7	0	1	5	4	1	5	5	20	4
13	AMIS 626	4	4	FIN	6	5	5	1	4	1	7	6	19	3.8
14	AMIS 626	4	4	ACT / FIN	3	3	4	6	5	5	5	6	27	5.4
15	AMIS 626	4		ACT	1	0	2	5	4	5	5	6	25	5
16	AMIS 626	4	4	ACT	5	0	5	1	5	1	5	6	18	3.6
17	AMIS 522	1	4	ACT	3	0		2	4	6	5	3	20	4
18	AMIS 522	1	4	PSYC/STAT	2	0	3	6	5	5	7	3	26	5.2
19	AMIS 522	1	4	ACT	4	0	1	5	3	4	7	4	23	4.6
20	AMIS 522	1	4	BIO / FIN	1	0	2	4	5	3	5	5	22	4.4
21	AMIS 522	1	4	ACT / FIN	3	2	3	6	5	6	6	6	29	5.8
22	AMIS 522	1	4	ACT / MKT	2	2	2	1	5	6	6	5	23	4.6
23	AMIS 522	1	4	UND	4	0	3	5	5	5	5	5	25	5
24	AMIS 522	1	4	FIN / MKT	2	1	3	2	3	3	4	4	16	3.2
25	AMIS 522	2	4	ACT	1	0	2	2	4	4	5	4	19	3.8
26	AMIS 522	2	4	ACT	3	1	3	5	6	5	4	6	26	5.2
27	AMIS 522	2	4	FIN	2	5	2	2	6	5	7	6	26	5.2
28	AMIS 522	2	3	FIN / MKT	2	0	2	5	5	4	6	5	25	5
29	AMIS 522	2	4	ACT / FIN	2	0	0	5	4	2	5	5	21	4.2
30	AMIS 522	2	4	ACT	3	1	3	7	7	7	7	7	35	7
31	AMIS 522	2	4	ACT	4	0	2	2	4	3	6	4	19	3.8
32	AMIS 522	3	4	FIN	2	1	3	5	4	5	5	5	24	4.8
33	AMIS 522	3	4	ACT	5	0	-2	5	5	6	6	6	28	5.6
34	AMIS 522	3		ACT	2	0	2	2	5	3	5	5	20	4
35	AMIS 522	3	4	FIN	2	3	3	5	5	5	3	4	22	4.4
36	AMIS 522	3	4	ACT	2	0	3	2	5	3	3	3	18	3.6
37	AMIS 522	3	4	FIN	2	5	3	2	4	3	2	6	17	3.4
38	AMIS 522	3	4	ACT	2	0	2	4	5	3	4	5	21	4.2
39	AMIS 522	3	4	FIN / OPS	2	5	3	1	2	1	6	3	15	3
40	AMIS 522	4		ACT	5	1	4	6	5	6	6	6	29	5.8
41	AMIS 522	4	4	FIN / ECON	2	3	-1	7	3	6	1	4	21	4.2
42	AMIS 522	4	GRAD	FIN / MATH	1	3	2	2	3	2	1	3	11	2.2
43	AMIS 522	4	3	FIN	1	0	2	1	3	4	3	3	14	2.8
44	AMIS 522	4	4	ACT	4	0	4	3	3	6	3	5	24	4.8
45	AMIS 522	4	4	ACT	4	0	3	3	4	2	5	4	18	3.6
46	AMIS 522	4	4	ACT	3	0	2	2	2	2	5	4	15	3
47	AMIS 624	1	4	ACT	8	0	2	2	3	3	5	4	17	3.4
48	AMIS 624	1	4	ACT	7	0	1	2	3	2	6	4	17	3.4
49	AMIS 624	1	4	ACT / MIS	4	0	2	5	5	5	4	7	26	5.2
50	AMIS 624	1	GRAD	ACT / FIN	5	6	4	3	5	4	4	5	21	4.2
51	AMIS 624	1	4	ACT	8	0	2	6	4	6	7	4	27	5.4
52	AMIS 624	2	4	ACT	8	0	3	1	4	3	5	4	17	3.4
53	AMIS 624	2	4	ACT	8	0	2	4	4	5	4	3	20	4
54	AMIS 624	2	4	ACT / MIS	8	0	4	3	5	2	5	6	21	4.2
55	AMIS 624	2	4	ACT	6	0	2	3	6	3	4	5	21	4.2
56	AMIS 624	3	4	ACT / RE	7	1	-1	2	1	5	1	5	14	2.8
57	AMIS 624	3	4	ACT	7	0	3	4	4	5	5	4	22	4.4
58	AMIS 624	3	4	ACT	7	0	-1	1	3	3	5	3	15	3
59	AMIS 624	3	4	ACT	7	0	4	6	6	6	6	4	28	5.6
60	AMIS 624	3	GRAD	ACT	8	0	-1	1	2	2	3	2	10	2
61	AMIS 624	4	4	ACT	7	0	-3	7	2	3	4	2	18	3.6
62	AMIS 624	4	4	ACT	8	0	-1	3	1	2	2	6	14	2.8
63	AMIS 624	4	4	ACT	7	1	0	6	6	7	4	4	27	5.4
64	AMIS 624	4	4	ACT	8	0	0	2	2	2	6	3	15	3
				MEAN	4.22	0.80	1.90	3.72	4.09	3.92	4.84	4.66	21.23	4.25

II.
Q1 AND Q2 COMMENTS

PART	CLASS	DESIGN	II
1	AMIS 626	1	expenses increase, Increase profit
2	AMIS 626	1	date software program
3	AMIS 626	1	
4	AMIS 626	1	How many companies need this software
5	AMIS 626	2	No payment time frames are given.
6	AMIS 626	2	more than enough to afford the loan
7	AMIS 626	2	flow shown as decreasing the 2nd year
8	AMIS 626	3	looks like they are in okay financial shape. The company seems stable and good
9	AMIS 626	3	N/P
10	AMIS 626	3	All information suggested a good plan and need for the service
11	AMIS 626	3	declining significantly in 2nd year
12	AMIS 626	3	software seemed good
13	AMIS 626	4	
14	AMIS 626	4	receive money faster
15	AMIS 626	4	I think this is a young company--more info will be needed to evaluate loan
16	AMIS 626	4	Increase in RE, Cash, & Net Profit with little increase in expenses
17	AMIS 522	1	Little increase in operating expenses
18	AMIS 522	1	year
19	AMIS 522	1	They have a high A/P and N/P in relation to cash
20	AMIS 522	1	Efficiency of MBR, higher claims turnover, reduction of processing costs, plus, it's a service company, so relatively low set-up costs
21	AMIS 522	1	debt in 2001
22	AMIS 522	1	claims?
23	AMIS 522	1	ratio
24	AMIS 522	1	Profit, RE, Financial ratios, cash flows
25	AMIS 522	2	Increase in RE, cash flows
26	AMIS 522	2	Prospective Income Statement & Net Profit
27	AMIS 522	2	
28	AMIS 522	2	cash flow
29	AMIS 522	2	Uncertainty of technology, future market share
30	AMIS 522	2	2001; Cash flow, especially the cash balance
31	AMIS 522	2	Assuming the numbers are accurately predicted, the lending officer mayde a good decision. However, as noted by the accountant, this is difficult to do
32	AMIS 522	3	

II.
Q1 AND Q2 COMMENTS

PART	CLASS	DESIGN	II
33	AMIS 522	3	financial statements show that there was a false allowance. It shows that receivables increased when they want to decrease this account.
34	AMIS 522	3	Net cash flow
35	AMIS 522	3	They had a substantial start up investment to contribute
36	AMIS 522	3	Increase in net income; Advanced software & technology should have helped them pay-off debt because of eventually decrease in processing costs
37	AMIS 522	3	The loan; Their commitment
38	AMIS 522	3	It appeared to be a reasonably secure decision, but MBR did not really provide information about the actual likelihood of success
39	AMIS 522	3	would present great returns
40	AMIS 522	4	Retained earnings, Net profit, Net cash flow, Total debt to total assets
41	AMIS 522	4	thend of 1st year. It does not seem feasible!
42	AMIS 522	4	Debt ratio dropped; CPA not give an unqualified report
43	AMIS 522	4	The kind of business; Financial ratios
44	AMIS 522	4	Increase net profit; Decrease in current ratio
45	AMIS 522	4	Debt to total assets ratio; Net cash flows
46	AMIS 522	4	from CPA
47	AMIS 624	1	
48	AMIS 624	1	statement; the plan
49	AMIS 624	1	Current ratio increase; Debt to assets decrease; cash increase; profits increase
50	AMIS 624	1	payables decreased, profitable corporation
51	AMIS 624	1	
52	AMIS 624	2	
53	AMIS 624	2	big risk assumed by relying on these numbers
54	AMIS 624	2	liabilities; Net profit will increase in subsequent years
55	AMIS 624	2	assets compared with industry profile, their commitment is also a key to making the loan work
56	AMIS 624	3	Prospective Balance Sheet
57	AMIS 624	3	The positive effect it would have on the hospital
58	AMIS 624	3	software updates were influential
59	AMIS 624	3	Positive net income; Increasing current ratio; Decreasing debt to asset ratio
60	AMIS 624	3	actual results
61	AMIS 624	4	there a need for this type of business?
62	AMIS 624	4	It takes a long time for people to get trained & proficient with new technology. The results they would expect would most likley take longer
63	AMIS 624	4	
64	AMIS 624	4	Increasing net profit; Total debt to total assets ratio

III.
DESIGN I RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
17	AMIS 522	1	4	ACT	3	0	0	2	4	6	5	3	20	4
18	AMIS 522	1	4	PSYC-STAT	2	0	3	6	5	5	7	3	26	5.2
19	AMIS 522	1	4	ACT	4	0	1	5	3	4	7	4	23	4.6
20	AMIS 522	1	4	BIO - FIN	1	0	2	4	5	3	5	5	22	4.4
21	AMIS 522	1	4	ACT - FIN	3	2	3	6	5	6	6	6	29	5.8
22	AMIS 522	1	4	ACT - MKT	2	2	2	1	5	6	6	5	23	4.6
23	AMIS 522	1	4	UND	4	0	3	5	5	5	5	5	25	5
24	AMIS 522	1	4	FIN - MKT	2	1	3	2	3	3	4	4	16	3.2
47	AMIS 624	1	4	ACT	8	0	2	2	3	3	5	4	17	3.4
48	AMIS 624	1	4	ACT	7	0	1	2	3	2	6	4	17	3.4
49	AMIS 624	1	4	ACT - MIS	4	0	2	5	5	5	4	7	26	5.2
50	AMIS 624	1	GRAD	ACT - FIN	5	6	4	3	5	4	4	5	21	4.2
51	AMIS 624	1	4	ACT	8	0	2	6	4	6	7	4	27	5.4
1	AMIS 626	1	4	ACT	3	0	2	2	3	3	5	4	17	3.4
2	AMIS 626	1	4	ACT	2	0	3	4	3	5	5	3	20	4
3	AMIS 626	1			1	0	2	7	7	6	6	6	32	6.4
4	AMIS 626	1	4	ACT - OPS	4	0	2	6	6	7	5	6	30	6
Number of Part.				MEAN	3.71	0.65	2.176	4.000	4.353	4.647	5.412	4.588	23.000	4.600
17				SD			0.951	1.893	1.258	1.459	1.031	1.138	4.996	0.999

IV.
DESIGN 2 RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO QI AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
25	AMIS 522	2	4	ACT	1	0	2	2	4	4	5	4	19	3.8
26	AMIS 522	2	4	ACT	3	1	5	5	6	5	4	6	26	5.2
27	AMIS 522	2	4	FIN	2	3	2	2	6	5	-	6	26	5.2
28	AMIS 522	2	3	FIN / MKT	2	0	2	5	5	4	6	5	25	5
29	AMIS 522	2	4	ACT / FIN	2	0	0	5	4	2	5	5	21	4.2
30	AMIS 522	2	4	ACT	3	1	5	-	-	-	-	-	35	-
31	AMIS 522	2	4	ACT	4	0	2	2	4	5	6	4	19	3.8
52	AMIS 624	2	4	ACT	8	0	5	1	4	5	5	4	17	3.4
53	AMIS 624	2	4	ACT	8	0	2	4	4	5	4	3	20	4
54	AMIS 624	2	4	ACT / MIS	8	0	4	3	5	2	5	6	21	4.2
55	AMIS 624	2	4	ACT	6	0	2	5	6	5	4	5	21	4.2
5	AMIS 626	2	GRAD	FIN	1	0	0	-	5	4	4	5	23	4.6
6	AMIS 626	2	4	ACT	4	0	5	5	5	5	5	6	24	4.8
7	AMIS 626	2	4	ACT / INT	7	1	3	2	2	2	5	5	12	2.4
Number of Part.				MEAN	4.21	0.57	1.786	3.786	4.643	3.714	5.000	4.929	22.071	4.414
14				SD			1.762	1.929	1.336	1.437	1.177	1.207	5.298	1.060

V.

DESIGN 3 RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
32	AMIS 522	3	4	FIN	2	1	3	5	4	5	5	5	24	4.8
33	AMIS 522	3	4	ACT	5	0	-2	5	5	6	6	6	28	5.6
34	AMIS 522	3		ACT	2	0	2	2	5	5	5	5	20	4
35	AMIS 522	3	4	FIN	2	3	3	5	5	5	3	4	22	4.4
36	AMIS 522	3	4	ACT	2	0	3	2	5	5	3	5	18	3.6
37	AMIS 522	3	4	FIN	2	5	3	2	4	5	2	6	17	3.4
38	AMIS 522	3	4	ACT	2	0	2	4	5	5	4	5	21	4.2
39	AMIS 522	3	4	FIN OPS	2	5	3	1	2	1	6	5	15	3
56	AMIS 624	3	4	ACT RE	7	1	-1	2	1	5	1	5	14	2.8
57	AMIS 624	3	4	ACT	7	0	3	4	4	5	5	4	22	4.4
58	AMIS 624	3	4	ACT	7	0	-1	1	3	3	5	3	15	3
59	AMIS 624	3	4	ACT	7	0	4	6	6	6	6	4	28	5.6
60	AMIS 624	3	GRAD	ACT	8	0	-1	1	2	2	3	2	10	2
8	AMIS 626	3	3	ACT FIN	3	0	2	6	5	5	5	5	28	5.6
9	AMIS 626	3	4	ACT	5	0	-2	5	5	4	6	7	27	5.4
10	AMIS 626	3	4	ACT	7	0	4	1	4	4	6	4	19	3.8
11	AMIS 626	3	GRAD	ACT FIN	6	1	4	3	2	2	6	3	16	3.2
12	AMIS 626	3	4	ACT	7	0	1	5	4	1	5	5	20	4
Number of Part.				MEAN	4.61	0.89	1.667	3.333	3.944	3.667	4.667	4.611	20.222	4.044
18				SD			2.114	1.847	1.392	1.572	1.645	1.195	5.320	1.064

VI.
DESIGN 4 RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
40	AMIS 522	4		ACT	5	1	4	6	5	6	6	6	29	5.8
41	AMIS 522	4	4	FIN / ECON	2	3	4	7	3	6	1	4	21	4.2
42	AMIS 522	4	GRAD	FIN / MATH	1	3	2	2	3	2	1	3	11	2.2
43	AMIS 522	4	3	FIN	1	0	2	1	3	4	3	3	14	2.8
44	AMIS 522	4	4	ACT	4	0	4	5	3	6	5	5	24	4.8
45	AMIS 522	4	4	ACT	4	0	3	3	4	2	3	4	18	3.6
46	AMIS 522	4	4	ACT	3	0	2	2	2	2	3	4	15	3
61	AMIS 624	4	4	ACT	7	0	3	7	2	3	4	2	18	3.6
62	AMIS 624	4	4	ACT	8	0	4	3	1	2	2	6	14	2.8
63	AMIS 624	4	4	ACT	7	1	0	6	6	7	4	4	27	5.4
64	AMIS 624	4	4	ACT	8	0	0	2	2	2	6	3	15	3
13	AMIS 626	4	4	FIN	6	5	5	1	4	1	7	6	19	3.8
14	AMIS 626	4	4	ACT / FIN	3	3	4	6	5	5	5	6	27	5.4
15	AMIS 626	4		ACT	1	0	2	5	4	5	5	6	25	5
16	AMIS 626	4	4	ACT	5	0	3	1	5	1	3	6	18	3.6
Number of Part.				MEAN	4.33	1.07	1.867	3.800	3.467	3.600	4.267	4.533	19.667	3.933
15				SD			2.416	2.274	1.407	2.063	1.792	1.407	5.576	1.115

VII.

AMIS 522 (INTERMEDIATE FINANCIAL ACCOUNTING II) CLASS RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
17	AMIS 522	1	4	ACT	3	0		2	4	6	5	3	20	4
18	AMIS 522	1	4	PSYC/SEAT	2	0	3	6	5	5	7	3	26	5.2
19	AMIS 522	1	4	ACT	4	0	1	5	3	4	7	4	23	4.6
20	AMIS 522	1	4	BIO / FIN	1	0	2	4	5	3	5	5	22	4.4
21	AMIS 522	1	4	ACT / FIN	3	2	3	6	5	6	6	6	29	5.8
22	AMIS 522	1	4	ACT / MKT	2	2	2	1	5	6	6	5	23	4.6
23	AMIS 522	1	4	UND	4	0	3	5	5	5	5	5	25	5
24	AMIS 522	1	4	FIN / MKT	2	1	3	2	3	3	4	4	16	3.2
25	AMIS 522	2	4	ACT	1	0	2	2	4	4	5	4	19	3.8
26	AMIS 522	2	4	ACT	3	1	3	5	6	5	4	6	26	5.2
27	AMIS 522	2	4	FIN	2	5	2	2	6	5	7	6	26	5.2
28	AMIS 522	2	3	FIN / MKT	2	0	2	5	5	4	6	5	25	5
29	AMIS 522	2	4	ACT / FIN	2	0	0	5	4	2	5	5	21	4.2
30	AMIS 522	2	4	ACT	3	1	3	7	7	7	7	7	35	7
31	AMIS 522	2	4	ACT	4	0	2	2	4	3	6	4	19	3.8
32	AMIS 522	3	4	FIN	2	1	3	5	4	5	5	5	24	4.8
33	AMIS 522	3	4	ACT	5	0	-2	5	5	6	6	6	28	5.6
34	AMIS 522	3		ACT	2	0	2	2	5	3	5	5	20	4
35	AMIS 522	3	4	FIN	2	3	3	5	5	5	3	4	22	4.4
36	AMIS 522	3	4	ACT	2	0	3	2	5	3	3	5	18	3.6
37	AMIS 522	3	4	FIN	2	5	3	2	4	3	2	6	17	3.4
38	AMIS 522	3	4	ACT	2	0	2	4	5	3	4	5	21	4.2
39	AMIS 522	3	4	FIN / OPS	2	5	3	1	2	1	6	5	15	3
40	AMIS 522	4		ACT	5	1	4	6	5	6	6	6	29	5.8
41	AMIS 522	4	4	FIN / ECON	2	3	-1	7	3	6	1	4	21	4.2
42	AMIS 522	4	GRAD	FIN / MATH	1	3	2	2	3	2	1	3	11	2.2
43	AMIS 522	4	3	FIN	1	0	2	1	3	4	3	3	14	2.8
44	AMIS 522	4	4	ACT	4	0	4	5	3	6	5	5	24	4.8
45	AMIS 522	4	4	ACT	4	0	3	3	4	2	5	4	18	3.6
46	AMIS 522	4	4	ACT	3	0	2	2	2	2	5	4	15	3
Number of Part 30				MEAN	2.57	1.10	2.21	3.70	4.30	4.17	4.83	4.73	21.73	4.35

VIII.
AMIS 624 (ADVANCED ACCOUNTING) CLASS RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
47	AMIS 624	1	4	ACT	8	0	2	2	3	3	5	4	17	3.4
48	AMIS 624	1	4	ACT	7	0	1	2	3	2	6	4	17	3.4
49	AMIS 624	1	4	ACT / MIS	4	0	2	5	5	5	4	7	26	5.2
50	AMIS 624	1	GRAD	ACT / FIN	5	6	4	3	5	4	4	5	21	4.2
51	AMIS 624	1	4	ACT	8	0	2	6	4	6	7	4	27	5.4
52	AMIS 624	2	4	ACT	8	0	3	1	4	3	5	4	17	3.4
53	AMIS 624	2	4	ACT	8	0	2	4	4	5	4	3	20	4
54	AMIS 624	2	4	ACT / MIS	8	0	4	3	5	2	5	6	21	4.2
55	AMIS 624	2	4	ACT	6	0	2	3	6	3	4	5	21	4.2
56	AMIS 624	3	4	ACT / RE	7	1	-1	2	1	5	1	5	14	2.8
57	AMIS 624	3	4	ACT	7	0	3	4	4	5	5	4	22	4.4
58	AMIS 624	3	4	ACT	7	0	-1	1	3	3	5	3	15	3
59	AMIS 624	3	4	ACT	7	0	4	6	6	6	6	4	28	5.6
60	AMIS 624	3	GRAD	ACT	8	0	-1	1	2	2	3	2	10	2
61	AMIS 624	4	4	ACT	7	0	-3	7	2	3	4	2	18	3.6
62	AMIS 624	4	4	ACT	8	0	-1	3	1	2	2	6	14	2.8
63	AMIS 624	4	4	ACT	7	1	0	6	6	7	4	4	27	5.4
64	AMIS 624	4	4	ACT	8	0	0	2	2	2	6	3	15	3
Number of Part 18				MEAN	7.11	0.44	1.22	3.39	3.67	3.78	4.44	4.17	19.44	3.89

IX.
AMIS 626 (TAX ACCOUNTING) CLASS RESULTS

PART	CLASS	DESIGN	RANK	MAJOR	TOTAL AMIS	TOTAL FIN	RESPONSES TO Q1 AND Q3							
							I	III(1)	III(2)	III(3)	III(4)	III(5)	III(Total)	III(Mean)
1	AMIS 626	1	4	ACT	3	0	2	2	3	3	5	4	17	3.4
2	AMIS 626	1	4	ACT	2	0	3	4	3	5	5	3	20	4
3	AMIS 626	1			1	0	2	7	7	6	6	6	32	6.4
4	AMIS 626	1	4	ACT / OPS	4	0	2	6	6	7	5	6	30	6
5	AMIS 626	2	GRAD	FIN	1	0	0	7	3	4	4	5	23	4.6
6	AMIS 626	2	4	ACT	4	0	3	5	5	5	5	6	24	4.8
7	AMIS 626	2	4	ACT / INT	7	1	-3	2	2	2	3	3	12	2.4
8	AMIS 626	3	3	ACT / FIN	3	0	2	6	3	5	7	5	28	5.6
9	AMIS 626	3	4	ACT	5	0	-2	5	5	4	6	7	27	5.4
10	AMIS 626	3	4	ACT	7	0	4	1	4	4	6	4	19	3.8
11	AMIS 626	3	GRAD	ACT / FIN	6	1	4	3	2	2	6	3	16	3.2
12	AMIS 626	3	4	ACT	7	0	1	5	4	1	5	5	20	4
13	AMIS 626	4	4	FIN	6	5	5	1	4	1	7	6	19	3.8
14	AMIS 626	4	4	ACT / FIN	3	3	4	6	5	5	5	6	27	5.4
15	AMIS 626	4		ACT	1	0	2	5	4	3	5	6	25	5
16	AMIS 626	4	4	ACT	5	0	3	1	5	1	3	6	18	3.6
Number of Part. 16				MEAN	4.06	0.63	2.13	4.13	4.19	3.63	5.31	5.06	22.31	4.46

APPENDIX B
QUESTIONNAIRE

I. Questionnaire given to participants in Cells *A*

II. Bankruptcy Outcome Knowledge and Instructions given to Cells *C* and *D*

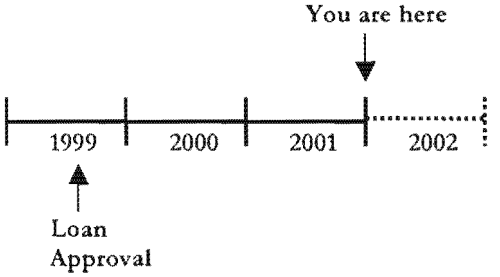
III. Versions of Unqualified Audit Opinion

Introduction

The purpose of this questionnaire is to study how individuals judge the future of early stage small businesses using the companies' prospective financial statements provided in the initial start-up business plans. In reviewing the information provided for you, we will ask you to evaluate the loan officer's decision in granting this start-up company a loan.

Your Role

You will assume the role of a loan examiner. You have been asked to evaluate the loan decisions made by a loan officer. In 1999, the loan officer approved a loan proposal submitted by a start-up company based on a set of 2-year prospective financial statements and assumptions made by the management of the company. It is now the end of 2001 and you will decide whether or not the loan officer made the right decision in evaluating this proposal.



Excerpts from MBR's 1999 loan application:

1. MBR, Inc. is seeking funding to become a full-service medical reimbursement business. The strategy is to provide one-stop shopping for medical billing and reimbursement support services for medical products. Charges to the medical practice are based on the work and the needs of each office.
2. Many medical practices have neglected simple administrative procedures, such as:
   - Keeping current with insurance specifications and regulations, so that claims are paid on a timely basis,
   - Concentrating on collecting receivables and co-payments,
   - Ensuring that fees are kept at the maximum allowable insurance carriers are paying, or
   - Procedure codes are current so that claims are not suspended or rejected.
3. To assist medical practices, the MBR, Inc. will offer electronic billing of medical insurance claims. This is critical since the Federal Government will mandate electronic submission of Medicare claims in the near future.
4. MBR, Inc.'s state-of-the-art software will allow the physician to verbally dictate patient records and to initiate reports to insurance providers using hand-held computers (PDAs).
5. Statistics show turnaround on paper insurance claims to be 30, 60, and even 90 days or longer, creating serious outstanding receivables for the practice. By submitting claims electronically, MBR can generally have money in the physician's hand within 14-18 days. This reduces outstanding receivables proportionately and tremendously improves cash flow.
6. MBR can reduce processing costs in medical practices by 50 percent or more with their electronic method of billing. Industry statistics indicate that it currently costs a medical practice between $8.00-$10.00 per claim to process insurance for their patients. However, setting up the technology to support the paperless infrastructure may create high expenses for MBR initially. With the expected client base and high level of transactions, increasing revenues later will offset the costs.
7. For its new software, MBR will conduct on-site introductory training sessions to help its customers. To meet the strict Health Care Financing Administration (HCFA) regulations, MBR will make sure that the software program is up-to-date with current regulations. Maintaining and updating this software will be a priority especially with the high level of competition and fragmentation in the medical billing industry.
8. MBR is contributing $55,000 to this business. Management is requesting to borrow an additional $90,000. The business will be financed mainly through cash flow. With a service-oriented business, the main investment is for initial software and computer equipment.

CPA's Opinion on MBR Inc.'s Prospective Financial Statements and Management's Assumptions for years 2000 and 2001:

We have examined the accompanying forecasted balance sheet, statements of income, and statements of cash flows of MBR, Inc. for the years 2000 and 2001. Our examination was made in accordance with standards for an examination of a forecast established by the American Institute of Certified Public Accountants and accordingly, included such procedures as we considered necessary to evaluate both the assumptions used by management and the preparation and presentation of the forecast.

In our opinion, the accompanying forecast is presented in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants, and the underlying assumptions provide a reasonable basis for management's forecast. However, there will usually be differences between the forecasted and actual results, because events and circumstances frequently do not occur as expected and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

[Signed]

Regional CPAs, LLP

June 30, 1999

Prospective Balance Sheet
(Prepared with assistance from CPA)

	2000	2001
Assets		
Cash	$ 98,957	$ 168,742
Accounts Receivable	67,809	75,324
Equipment & Software (Net)	110,860	139,185
Total Assets	**277,626**	**383,251**
Liabilities and Capital		
Accounts Payable	75,788	89,624
Notes Payable	84,112	78,609
Paid in Capital	55,000	55,000
Retained Earnings	62,726	160,018
Total Liabilities and Capital	**$ 277,626**	**$ 383,251**

Prospective Income Statement
(Prepared with assistance from CPA)

	2000	2001
Sales	$ 168,000	$ 235,200
Total Operating Expenses	(89,593)	(113,584)
Taxes Incurred	(15,681)	(24,323)
Net Profit	**62,726**	**97,293**
Beg. Retained Earnings	0	62,726
Ending Retained Earnings	**$ 62,726**	**$ 160,018**

Prospective Statement of Cash Flows
(Prepared with assistance from CPA)

	2000	2001
Net Profit	$ 62,726	$ 97,293
Depreciation	19,752	20,584
Change in Accounts Payable	75,788	13,836
Change in Notes Payable	84,112	(5,503)
Change in Accounts Receivable	(67,809)	(7,515)
Net Cash Flow	**$ 174,569**	**$ 118,695**
Cash Balance	$ 98,957	$ 168,742

Selected financial ratios

Ratios	2000	2001	Industry Profile
Current	2.20	2.72	1.57
Total Debt to Total Assets	57.60%	43.90%	63.70%

In 1999, the lending officer approved a loan for MBR, Inc. in the amount of $90,000 with the preceding information.

I. How strongly do you believe that the loan officer's decision, ***at the time he/she made it***, to grant the loan was the right decision (please circle)?

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

Strongly believe that the Loan Officer **DID NOT** make the right decision

Strongly believe that the Loan Officer **DID** make the right decision

II. What other factors in the information given influenced you in selecting the answer above? Please list.

_____

_____

_____

_____

III. Please evaluate each of the following questions (please circle):

1. How much responsibility is the CPA assuming for the accuracy of the forecasted financial statements?

Little Responsibility 1 2 3 4 5 6 7 Great Responsibility

2. How confident are you that the forecasted financial statements accurately reflect the probable future financial position, results of operations, and cash flows of MBR, Inc.'s services?

Little Responsibility 1 2 3 4 5 6 7 Great Responsibility

3. How much assurance is the CPA giving with respect to the achievability of forecasted results?

Little Responsibility 1 2 3 4 5 6 7 Great Responsibility

4. To what extent do you feel the CPA evaluated the assumptions made by the management of MBR, Inc.'s services to generate the projected financial statements?

Little Responsibility 1 2 3 4 5 6 7 Great Responsibility

5. In making a loan decision, how much reliance would you place on the projected financial statements?

Little Responsibility 1 2 3 4 5 6 7 Great Responsibility

II.

Bankruptcy Outcome Knowledge and Instructions given to Cells *C* and *D*

In 1999, the lending officer approved a loan for MBR, Inc. in the amount of $90,000 with the preceding information.

Recently, MBR, Inc. has filed for bankruptcy. However, in answering the following questions, *we would like for you to ignore what actually happened and base your answers on the preceding information*.

III.

Versions of Unqualified Audit Opinion

A. Standard Unqualified Opinion:

CPA's Opinion on MBR Inc.'s Prospective Financial Statements and Management's Assumptions for years 2000 and 2001:

We have examined the accompanying forecasted balance sheet, statements of income, and statements of cash flows of MBR, Inc. for the years 2000 and 2001. Our examination was made in accordance with standards for an examination of a forecast established by the American Institute of Certified Public Accountants and accordingly, included such procedures as we considered necessary to evaluate both the assumptions used by management and the preparation and presentation of the forecast.

In our opinion, the accompanying forecast is presented in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants, and the underlying assumptions provide a reasonable basis for management's forecast. However, there will usually be differences between the forecasted and actual results, because events and circumstances frequently do not occur as expected and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

B. Unqualified Opinion with Additional Comments about Management's Assumptions:

We have examined the accompanying forecasted balance sheet, statements of income, and statements of cash flows of MBR, Inc. for the years 2000 and 2001. Our examination was made in accordance with standards for an examination of a forecast established by the American Institute of Certified Public Accountants and accordingly, included such procedures as we considered necessary to evaluate both the assumptions used by management and the preparation and presentation of the forecast.

In our opinion, the accompanying forecast is presented in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants, and the underlying assumptions provide a reasonable basis for management's forecast. The ability for the company to establish its initial software and technology equipment is critical to the success of its assumptions. The set-up costs associated with its technology and software may result in higher costs initially, to be later offset by increasing revenues. In addition, its projected sales will be based on the company's ability to capture a significant share in a highly competitive market. However, there will usually be differences between the forecasted and actual results, because events and circumstances frequently do not occur as expected and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

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